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मानक

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“The Right to Information, The Right to Live”

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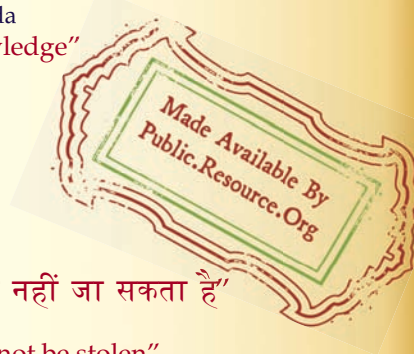
IS 5975 (2003): Specification - Raw Sugar [FAD 2: Sugar Industry]



“ज्ञान से एक नये भारत का निर्माण”

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
कच्ची चीनी — विशिष्टि
(पहला पुनरीक्षण)

Indian Standard
RAW SUGAR — SPECIFICATION
(*First Revision*)

ICS 67.180.10

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

**AMENDMENT NO. 1 FEBRUARY 2005
TO
IS 5975 : 2003 RAW SUGAR — SPECIFICATION
(*First Revision*)**

(*Page 1, clause 6.1*) — Delete items (d) and (f) and text contained therein.

(FAD 2)

Reprography Unit, BIS, New Delhi, India

**AMENDMENT NO. 2 JUNE 2011
TO
IS 5975 : 2003 RAW SUGAR — SPECIFICATION**

(First Revision)

[Page 1, clause 6.1(c)] — Substitute 'Net quantity' for 'Net weight'.

(FAD 2)

Reprography Unit, BIS, New Delhi, India

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sugar Industry Sectional Committee had been approved by the Food and Agriculture Division Council.

Raw sugar is manufactured in India mainly for exports, which have been rising steadily during the past few years. It is, therefore, imperative to assess and control the quality of raw sugar. This standard was published in 1970. The adoption of this standard in India would help in defining the quality of raw sugar in a manner that would enable better quality control. Besides, it will help in achieving uniformity in the methods of analysis of raw sugar thereby facilitating the comparison and interpretation of results.

The revision of this standard is being undertaken in view of the following:

- a) To align with the revised Codex Standard for Sugars, CODEX STAN 212-1999; and
- b) To align the methods of test with the International Commission for Uniform Methods of Sugar Analysis (ICUMSA).

In the preparation of this standard due consideration has been given to the provisions of *Prevention of Food Adulteration Act*, 1954 and Rules framed thereunder. However, this standard is subject to restrictions imposed under this Act, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

RAW SUGAR — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and analysis for raw sugar.

2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards given below:

<i>IS No.</i>	<i>Title</i>
460 (Part 1) : 1985	Specification for test sieves: Part 1 Wire cloth test sieves (<i>third revision</i>)
1151 : 2003	Refined sugar — Specification (<i>second revision</i>)
1943 : 1995	Textiles — A-twill jute bags — Specification (<i>second revision</i>)
10146 : 1982	Specification for polyethylene for its safe use in contact with foodstuffs, pharmaceuticals and drinking water
10910 : 1984	Specification for polypropylene and its copolymers for its safe use in contact with foodstuffs, pharmaceuticals and drinking water
14350 : 1996	Code for hygienic conditions in sugar factories
15279 : 2003	Sugar and sugar products — Methods of test

3 TERMINOLOGY

3.0 For the purpose of this standard, the following definition shall apply.

3.1 **Raw Sugar** — Unwashed, centrifugal sugar with a minimum polarization of 96.5°Z; surrounded by the original film of molasses; derived from sugarcane or sugar beet; to be further refined or reprocessed for making it direct consumption sugar.

4 REQUIREMENTS

4.1 **Description** — Raw sugar shall be in the form of uniform fine crystals. It shall be free from dirt and extraneous matter and from fermented, musty or other undesirable odour.

4.2 The product shall also comply with the requirements given in Table 1.

4.3 Raw sugar shall be manufactured, packed, stored and distributed under hygienic conditions (*see* IS 14350).

Table 1 Requirements for Raw Sugar
(Clause 4.2)

Sl No.	Characteristic	Requirement	Method of Test, Ref to	
			Annex of this Standard	CI No. of IS 15279
(1)	(2)	(3)	(4)	(5)
i)	Polarization, <i>Min</i>	96.5° Z	—	6
ii)	Reducing sugars, percent by mass, <i>Max</i>	1.0	—	7
iii)	Sulphated ash, percent by mass, <i>Max</i>	0.8	—	10
iv)	Safety factor, <i>Min</i>	0.3	A	—
v)	Crystal size, material to be retained on 500 micron IS sieve, percent, <i>Min</i>	95.0	B	—
vi)	Sulphur dioxide, mg/kg, <i>Max</i>	20	—	13

5 PACKING

Raw sugar shall be packed in clean, sound and new jute bags (*see* IS 1943) or bags made of polypropylene (*see* IS 10910) or bags made of high density polyethylene (*see* IS 10146). The jute bags may be lined with polyethylene film. The mouth of each bag shall be either machine-stitched or rolled over and hand-stitched. If hand-stitched, the stitches shall be in two rows with at least 14 stitches in each row.

6 MARKING

6.1 Each bag/pack shall bear legibly and indelibly the following particulars:

- Name of the product;
- Name and address of the manufacturer;
- Net weight of sugar in the bag;
- Month and year of manufacture;
- Batch or code number;
- The words 'Best before' (month and year to be indicated); and

- g) Any other requirements as specified under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977* and *Prevention of Food Adulteration Act, 1954* and Rules framed thereunder.

6.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

6.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986*

and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7 SAMPLING

Representative samples of raw sugar shall be drawn and the criteria for conformity to this standard shall be established, according to the method prescribed in Annex A of IS 1151.

ANNEX A

[Table 1, Sl No. (iv)]

CALCULATION OF SAFETY FACTOR

A-1 CALCULATION

Calculate the safety factor of raw sugar by the following formula:

$$\frac{\text{Moisture content}}{100 - \text{polarization } ^\circ\text{Z}}$$

ANNEX B

[Table 1, Sl No. (v)]

DETERMINATION OF CRYSTAL SIZE

B-1 APPARATUS

B-1.1 Hot-Air-Oven

B-1.2 Standard Sieves — 500-micron IS sieve or equivalent.

NOTE — In case IS Sieves [see IS 460 (Part 1)] are not available, BS Sieve 30, ASA Sieve 35, and Tyler Sieve 32, which have their apertures within the limits specified for 500-micron IS Sieve may be used.

B-2 PROCEDURE

Take 100 g of raw sugar, wash with 100 ml of anhydrous alcohol and dry. Remove the excess of alcohol by filtration. Dry the washed sugar in an air oven at 80°C for 1 h. Cool and sift the sugar in IS or equivalent sieves in an automatic shaker for 5 min. Find the weight retained on each standard sieve and directly calculate the percentage of sugar corresponding to different grain sizes.

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This Indian Standard has been developed from Doc: No. FAD 2 (1374).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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